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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,858	02/01/2001	Samuel Talmadge	12-1049	8421

7590

08/29/2003

Patent Counsel  
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EXAMINER

DALENCOURT, YVES

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 08/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/775,858

Applicant(s)

TALMADGE ET AL.

Examiner

Yves Dalencourt

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 February 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This action is responsive to communication filed on 02/01/01.

#### ***Information Disclosure Statement***

The listing of references in the specification (page 10, lines 3 – 6) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

#### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: please insert " 40 " for low power battery (figure 3b). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Specification***

The disclosure is objected to because of the following informalities: it suggested to delete " (MIC) " ( page 8, line 5) and insert -- (MMIC) --.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 2, 4, 12, and 16 - 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Fred Sterzer (US 4,001,822; hereinafter Sterzer).

Regarding claim 1, Sterzer teaches a communication system (figure 5), which comprises an interrogator (110, figure 5; the claimed a probe), the interrogator transmitting a modulated radio frequency request signal (147, figure 5; col. 8, lines 62 – 67) and receiving a modulated radio frequency response signal in response thereto (149, figure 5; col. 9, lines 7 – 11); a vehicle spaced from the probe (102, figure 6; col. 9, lines 52 – 61); a tag attached to a component of the vehicle ( 100, figure 5; col. 2, lines 28 – 35, abstract), the tag displaying a registration of the vehicle ( 12, figure 1), receiving the modulated radio frequency request signal and transmitting the modulated radio frequency response signal corresponding thereto (col. 2, lines 43 – 53; paragraph bridging col. 10, line 53 through col. 11, line 3).

Regarding claim 2, Sterzer teaches a communication system, wherein the vehicle component is a vehicle license plate (100, figure 5; col. 8, lines 65 – 67).

Regarding claim 4, Sterzer teaches a communication system, wherein the tag comprises transceiving circuitry for processing the modulated radio frequency request

signal and generating the modulated radio frequency response signal (see front end of license plate 100, figure 5; paragraph bridging col. 8, line 62 through col. 9, line 15).

Regarding claim 12, Sterzer teaches a communication system, wherein the transceiving circuitry is a non-linear element having a resonant antenna for generating and retransmitting harmonic energy (see figure 4; col. 4, lines 2 - 46).

Regarding claim 16, Sterzer teaches a communication system, wherein the interrogator (probe) comprises radio frequency and signal processing circuitry for generating the modulated radio frequency request signal and processing the modulated radio frequency response signal (110, figure 5; col. 8, lines 29 – 44; paragraph bridging col. 8, line 62 through col. 9, line 41).

Regarding claim 17, Sterzer teaches a communication system, wherein the interrogator (probe) comprises an antenna for transmitting the modulated radio frequency request signal and receiving the modulated radio frequency response signal (128, figure 5; col. 8, lines 62 – 65).

Regarding claim 18, Sterzer teaches a communication system, wherein the interrogator (probe) is in police vehicle 172 (182, figure 6; col. 10, lines 26 – 45; the claimed mobile).

Regarding claim 19, Sterzer teaches a communication system, wherein the interrogator (probe) is stationary (col. 2, lines 28 - 35; col. 9, lines 59 - 63).

Regarding claim 20, Sterzer teaches a communication system, wherein the modulated RF response signal is modulated with data containing an identification of the vehicle (col. 10, lines 61 - 67).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Fred Sterzer (US 4,001,822; hereinafter Sterzer) in view of Adcox et al ( US 6388579; hereinafter Adcox)

Regarding claim 3, Sterzer teaches a license tag or plate mounted on a vehicle, which generally requires a registration of the vehicle in order to obtain such tag, and including all the limitations on claim 1, but fails to specifically teach that the registration of the vehicle is a renewable state department of motor vehicle registration.

However, Adcox et al teaches, in the same field of endeavor, the idea of a vehicle registration being a renewable state department of motor vehicle registration (col. 1, lines 21 – 44; col. 3, lines 33 – 39).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a vehicle registration, which is a renewable state department of motor vehicle registration in Sterzer's device as evidenced by Adcox et al because Sterzer suggests a tag displaying a registration of the vehicle and Adcox et al further teaches that such registration is a renewable state department of motor vehicle registration for the purpose of allowing local, state, and national governments to control licensing and operation of vehicles in order to promote public safety and obtain revenue.

Claims 5 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Fred Sterzer (US 4,001,822; hereinafter Sterzer) in view of Paul A. Lovoi (US 6,480,699; hereinafter Lovoi).

Regarding claims 5 – 9, Sterzer teaches all the limitations on claim 4, above, but fails to specifically teach a system, wherein the transceiving circuitry is low duty cycle micropower monolithic microwave integrated circuitry (MMIC)(claim 5); wherein the low duty cycle micropower monolithic microwave integrated circuitry (MMIC) comprises a low-power battery (claim 6); wherein the low duty cycle micropower monolithic microwave integrated circuitry (MMIC) comprises a microprocessor (claim 7); wherein the low duty cycle micropower monolithic microwave integrated circuitry (MMIC) further comprises a real time clock (claim 8); wherein the low duty cycle micropower monolithic microwave integrated circuitry (MMIC) further comprises a memory device (claim 9).

However, Lovoi teaches, in the same field of endeavor, a stand-alone device for transmitting a wireless signal containing data from a memory or a sensor, wherein the transceiving circuitry is low duty cycle micropower monolithic microwave integrated circuitry (MMIC)(100, figure 1A; col. 2, lines 51 – 66; paragraph bridging col. 6, line 54 through col. 7, line 23; col. 3, lines 34 – 51; col. 8, lines 37 – 39; col. 12, lines 35 - 49); wherein the low duty cycle micropower monolithic microwave integrated circuitry (MMIC) comprises a low-power battery (col. 3, lines 33 - 41); wherein the low duty cycle micropower monolithic microwave integrated circuitry (MMIC) comprises an access decoder (530, figure 5B; col. 14, lines 9 – 21; the claimed a microprocessor); wherein the low duty cycle micropower monolithic microwave integrated circuitry (MMIC) further comprises a real time clock (col. 18, lines 18 - 22); wherein the low duty cycle micropower monolithic microwave integrated circuitry (MMIC) further comprises a memory device (col.16, lines 29 - 34); for measuring an axial acceleration of the vehicle (col. 15, lines 35 – 40; col. 18, lines 35 - 40).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a low duty cycle micropower monolithic microwave integrated circuitry (MMIC) including all the limitations mentioned above in Sterzer's device as evidenced by Lovoi because Sterzer suggests using a low power transceiving circuitry and Lovoi further teaches a low duty cycle micropower monolithic microwave integrated circuitry (MMIC) including all the limitations mentioned above for the purpose of providing a tag which is less expensive to fabricate and provides less interference with other electronic devices that are affected by RF signals (see col. 3, lines 36 – 40).



Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Fred Sterzer (US 4,001,822; hereinafter Sterzer) in view of applicant's admitted prior art (see specification paragraph bridging page 9, line 21 through page 10, line 4).

Regarding claims 10 and 11, Sterzer teaches all the limitations on claim 4, but fails to specifically teach a communication system, wherein the transceiving circuitry is digitally controlled integrated circuitry (claim 10); and wherein the transceiving circuitry is surface acoustic wave (SAW) coded delay line filter circuitry (claim 11).

However, applicant's admitted that having a transceiving circuitry, which is a digitally controlled integrated circuitry, and a surface acoustic wave (SAW) coded delay line filter circuitry is well known in the art of passive smart tag art (see specification, paragraph bridging page 9, line 21 through page 10, line 4).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a transceiving circuitry, which is a digitally controlled integrated circuitry, and a surface acoustic wave (SAW) coded delay line filter circuitry in Sterzer's device as evidenced by applicant's admitted prior art for the purpose of providing a less complex and thus more cost-effective configuration.

Claims 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Fred Sterzer (US 4,001,822; hereinafter Sterzer) in view of Sol Boles (US 5,506,584; hereinafter Boles).

Regarding claims 13 and 21, Sterzer teaches all the limitations on claim 1, but fails to specifically teach a communication system, wherein the tag comprises an omnidirectional antenna for receiving the modulated radio frequency request signal and

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transmitting the modulated radio frequency response signal (claim 13); and wherein the modulated RF response signal is modulated with data for determining a location, a speed and a direction of the vehicle (claim 21).

Sterzer teaches an antenna 36 in the plate 100 which is arranged to form a highly directional radiation or response pattern (col. 9, lines 55 – 57)

However, Boles teaches, in the same field of endeavor, a radar sensor/processor for intelligent vehicle highway systems, wherein the transponder comprises an omnidirectional antenna for receiving the modulated radio frequency request signal and transmitting the modulated radio frequency response signal (62, figure 2; col. 6, lines 19 – 23); and wherein the modulated RF response signal is modulated with data for determining a location, a speed and a direction of the vehicle (col. 2, lines 11 – 16 and lines 48 – 63).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a transponder comprises an omni-directional antenna for receiving the modulated radio frequency request signal and transmitting the modulated radio frequency response signal (62, figure 2; col. 6, lines 19 – 23); and wherein the modulated RF response signal is modulated with data for determining a location, a speed and a direction of the vehicle in Sterzer's device as evidenced by Boles because Sterzer suggests an antenna 36 in the plate 100 which is arranged to form a highly directional radiation or response pattern and transmits vehicle identification data back to the interrogator and Boles further teaches a transponder comprising an omnidirectional antenna and transmits a modulated radio frequency

response signal containing speed and location of the vehicle for the purpose of providing an intelligent vehicle identification system with a transponder that can receive from and transmit in virtually all directions.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Fred Sterzer (US 4,001,822; hereinafter Sterzer) in view of David S. Breed ( US 2001/0002451A1).

Regarding claims 14 and 15, Sterzer teaches all the limitations on claim 1, but fails to specifically teach a tag, which further comprises a sensor for measuring an axial acceleration of the vehicle (claim 14); and wherein the sensor is a micro electro mechanical system (MEMS) accelerometer (claim 15).

However, Breed teaches, in an art related field of RFID technology, a method and apparatus for controlling a vehicular component, which comprises a tag which further comprises a sensor for measuring an axial acceleration of the vehicle; and wherein the sensor is a micro electro mechanical system (MEMS) accelerometer (paragraph bridging page 3, line 52 through page 4, line 23; page 3, paragraphs 0191 and 0192).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a tag which further comprises a sensor for measuring an axial acceleration of the vehicle; and wherein the sensor is a micro electro mechanical system (MEMS) accelerometer in Sterzer's device as evidenced by Breed because sterzer suggests using a MEMS sensor embedded in a tag for measuring acceleration of an object and Breed further teaches a micro electro mechanical system

embedded in a tag for measuring an axial acceleration of the vehicle for the purpose of controlling a component of the vehicle in consideration of the diagnosed state or condition of the vehicle, and maintaining the stability of the vehicle.

***Allowable Subject Matter***

Claim 22 is allowed.

The following is a statement of reasons for the indication of allowable subject matter: As specifically claimed, the art of record fail to teach, among other limitations, in combination, a communication system which comprises a first probe located on the first vehicle and a second probe located on the first vehicle; a second vehicle spaced from the first vehicle; a tag attached to the second vehicle, the tag displaying a registration of the second vehicle, receiving the first modulated radio frequency request signal and the second modulated radio frequency request signal, transmitting the first modulated radio frequency response signal in response to the first modulated radio frequency request signal, and transmitting the second modulated radio frequency response signal in response to the second modulated radio frequency request signal, the first and second modulated radio frequency response signals each having a transmission delay; and a processor unit connected to the first and the second probe, the processor unit determining a location of the first vehicle relative to the second vehicle using the transmission delay of each of the first and second radio frequency modulated response signals.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reindl et al (US Patent Number 6,121,892) discloses a SAW identification or sensor configuration operating with surface acoustic waves.

Marvin Cohn (US Patent Number 5,387,916) discloses an automotive navigation system and method.

### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yves Dalencourt whose telephone number is (703) 308-8547. The examiner can normally be reached on M-TH 7:30AM - 6: 30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (703) 305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

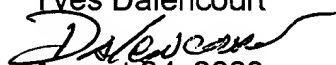
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Yves Dalencourt



August 24, 2003